

THE ABDOMINAL MORPHOLOGY OF MALE *SESSINIA DECOLOR* (FAIRM.): OEDEMERIDAE

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The present paper and illustrations of *Sessinia decolor* (Fairm.) are published at this time in order to clarify certain points in the terminology used in my forthcoming revision of the Nearctic Oedemeridae. These figures represent the abdomen well distended, being drawn from a fresh specimen which was soaked for a short time in weak caustic and then inflated by injection with absolute alcohol which fixed it in the distended position.

The abdomen (fig. 1) of the Oedemeridae belongs to the cryptogaster type, type III of Jeannel and Paulian (1944). Tergites one to eight are present, distinct, and each is associated with a spiracle. Tergite nine is also present, but there is no evidence of a spiracle nine. There is no indication of a sternite one, the absence of which is generally accepted as true for all Coleoptera. Sternites two and three are solidly united and this sternite is as broad as tergite two and three together. Sternites four to eight are separate and each is associated with a spiracle. Sternite nine is present and well developed. It will be noted that the spiracles are located on the membranous margins of the tergites, in a central position in the case of tergites three to six. The line separating the main part of the tergite from the membranous part bearing the spiracle is a deep fold and not a true suture.

The apical abdominal segments, as well as the genitalia** of male Oedemeridae are subject to considerable modification. Segments eight and nine undoubtedly take part in the copulatory actions. In many cases segments eight and nine are subject to greater modifications than the genitalia, and offer many generic and specific characters.

Figure two shows the sclerotized as well as the membranous parts of the apical segments and genitalia in detail. In normal position these membranous areas are folded back into the abdomen so that the apical portions of the membrane is directed dorsad. A tube, the seminal duct, runs inside of the median lobe. The eversible internal sac, which is found in a great many other beetles, is absent. The anus opens at a point just before the apex of tergite nine. The median lobe and tegmen

* Genitalia may be defined as the portion of the abdomen between sternite nine and the anus which bears the seminal duct and the internal sac.

are extruded immediately below this point. I have preferred to use the term "tegmen", rather than "lateral lobes" because in many species of Oedemeridae this structure is a single trough-like piece lying ventrad to the median lobe and not two lobes lying one on each side of the median lobe as in many beetle species. I have also preferred the term "median lobe" to the term "aedeagus," which, following Sharp and Muir (1912), refers to the median lobe and tegmen together.

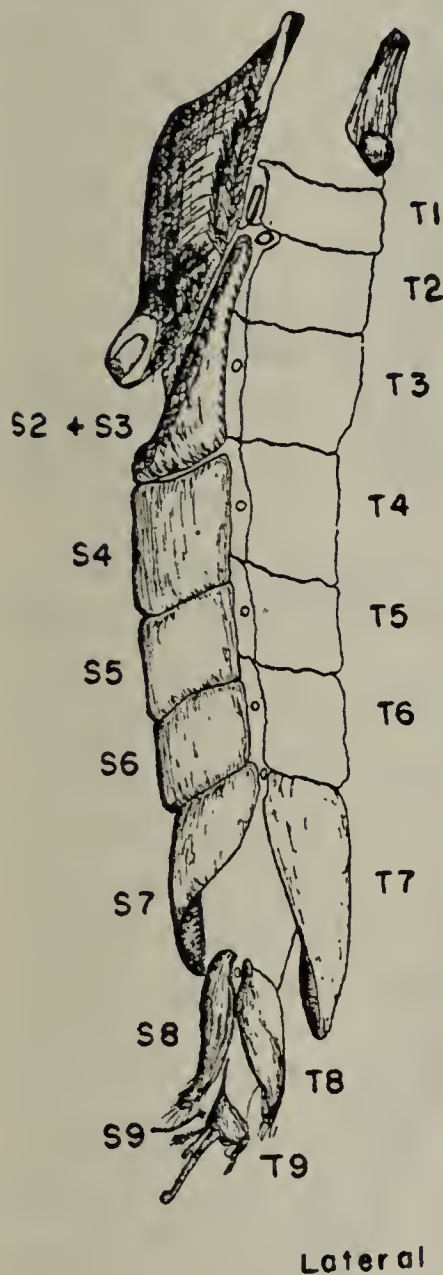
Up to this point, most of the structures discussed are nearly universally understood. There is a structure present in male Oedemerids which I have termed *tegminite*, which, I believe, has not heretofore been discussed. It is located ventrally in the membrane between the apex of sternite nine and the base of the tegmen, with the apex hanging free. In the species illustrated it appears as a slender rod, somewhat expanded apically. The size and shape of this structure varies considerably throughout the family. In the present species, it appears more closely associated with sternite nine than the tegmen, though the name *tegminite* is intended to imply that it is, or at least was originally more closely associated with the tegmen. I have been led to believe that it is a modification of the basal part of the tegmen because in theoretically primitive genera, such as *Calopus*, this structure is nearly as large as the tegmen, of similar shape, and separated from the tegmen by only a narrow area of membrane. In other families, the tegmen is composed of two parts separated by only a very narrow suture or even by no more than an impressed line. This has led me to conclude that the tegminite is a structure which has broken away from the tegmen, and not a division of the apex of sternite nine. Such a belief is far from established however, and a study of the musculature, tracheation and a comparison with the structure of the genitalia of many other forms will be necessary before the homology of this part can be determined.

At the present writing, I know of only one other group of Coleoptera which has a structure comparable to the tegminite represented. I have observed what is perhaps the same part in some Pythidae.

Finally, it is necessary to point out that the general form of the genitalia illustrated represents only one of five types, (or perhaps more) found in the Oedemeridae. This I have termed the "Asclerini-type".

REFERENCES CITED

- JEANNEL, R. & R. PAULIAN, 1944, Morphologie Abdominale des Coleopteres et Systematique de l'Ordre, *Rev. Fran. D'Ent.*, 11:65-110.
- SHARP, D. & F. MUIR, The Comparative Anatomy of the Male Genital Tube in Coleoptera, *Trans. Ent. Soc. Lond. for 1912*, 477-642, pls. XLII-LXXVII.



Lateral

Figure 1

Fig. 1. Male, lateral view of the abdomen of *Sessinia decolor* (Fairm.). Drawn from a distended specimen.

Fig. 2. Male, lateral and ventral views of the details of the apical abdominal segments and genitalia of *Sessinia decolor* (Fairm.). Drawn from a distended specimen.

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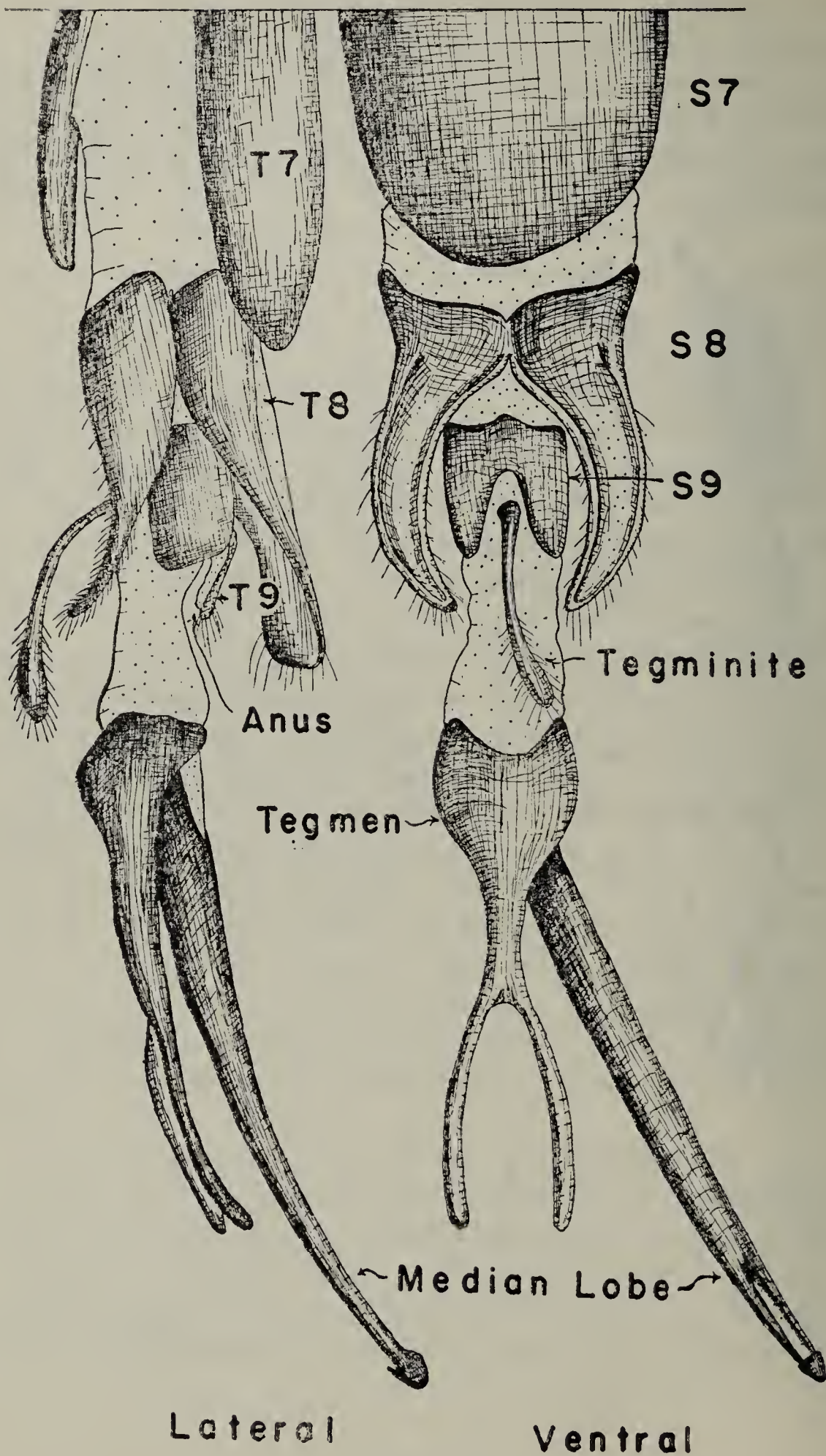


Figure 2